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Discovery of the underlying dimensions of teachers' observations of discrete, overt problem behaviors, and determination of the extent to which these dimensions of problem behavior are related to other indices of adaptation to school among Anglo-, Negro-, and Mexican-American children are the research objectives. Teacher nomination forms contained 72 discrete and specific problem behaviors. Each child, of 600 fourth graders, was eligible to receive behavior nominations from two different teachers, and on two different occasions from the same teacher. The nomination scores were intercorrelated and factored. (PS)

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Differences between Anglo and Non-Anglo Children on Factorial Dimensions of School Anxiety and Coping Style

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Negative relationships between anxiety and socio-cultural status have been reported, although this relationship may be complicated by differences in defensiveness. Also, anxiety and defensiveness appear to be multi-dimensional constructs; and the implication of this for socio-cultural status and anxiety relationships needs to be considered. Finally, sex differences in both defensiveness and anxiety frequently are obtained; and sex probably is an important variable to take into account in a study of socio-cultural status differences in anxiety and defensiveness. With this and results of a recent project showing Non-Anglo children (i.e., Negroes and Mexican-Americans) to be more anxious in school and more stylistic in responding to questionnaires than Anglo children (Phillips, 1966) as background, the purpose of the present study was to examine sex and socio-cultural differences on factorial dimensions of school anxiety and coping style (which represents aspects of defensive responding).

Procedures

For the purposes of the project previously referred to, school anxiety was conceptualized as having situational and dispositional aspects. School situations differ in their potential for evoking anxiety (e.g. highly evaluation-oriented situations typically evoke anxiety in a majority of children), and children differ in proneness to be anxious in a variety of situations. With these two aspects of anxiety being related, children with high school anxiety are not only more prone to respond anxiously, but because they are, they more often respond anxiously to situations with a low potential for evoking anxiety.

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Coping style implies ways of cognitively dealing with situations; and in its application to the project previously referred to, coping style is conceptualized as a response tendency which children show in situations perceived by them as threatening. More specifically, the conception is developed that coping style in this type of situation is a manifestation of the "self-enhancing" tendency (Rogers), and an approach and an avoidance coping style are postulated. The research conditions under which these styles of coping are presumed to be present are summarized in Figure 1.

Figure 1 about here

The School Anxiety Scale and the Coping Style Scale, developed in the project already referred to, were derived through factor analysis (image analysis, with principal axis and varimax rotation) of the 198 item Children's School Questionnaire. This instrument was orally administered in three 66-item forms about a week apart at the beginning and end of fourth grade and again in the following year to essentially the same group of about 550 children in eight elementary schools in fifth grade. The CSQ was made up of items from research instruments appearing in the literature (see Phillips, 1966, for details) which were designed to measure test anxiety, defensiveness, audience anxiety, achievement anxiety, and proneness toward neuroticism (general anxiety), and included 40 other items relating to aspects of school anxiety and approach and avoidance styles of coping prepared by the project staff.

Image analyses of the CSQ responses were carried out for the Fall, fourth grade data and again for the Fall, fifth grade data; and school anxiety and coping style factors were clearly replicated on the two occasions. The School Anxiety Scale had 74 items and the Coping Style Scale had 37; and item responses to each of these scales were separately factored for the Spring, fifth grade data.

Extracting and rotating factors with eigenvalues of 1.00 or greater, four factors were obtained for the School Anxiety Scale, and the six items considered as the best representatives of each of these four School Anxiety Scale factors in terms of size and clarity of loadings are listed in Table 1 where the factors are identified.

Table 1 about here

Since it had been shown that the stability of the Coping Style Scale scores across the school year were lower than those for the School Anxiety Scale, a second factor analysis based on Spring, fourth grade data was completed for the Coping Style Scale items; and an examination of these two sets of factors indicated six factors sufficiently replicated to be considered further. The items which best represent these six factors are listed in Table 2.

Table 2 about here

A further factor analysis was performed on intercorrelations of scores derived for each of these ten factors, although it should be noted that "factor scores" were obtained by simply assigning unit weights to these items and summing. In view of Horn's (1965) observations this seemed preferable for our purposes to the use of more elaborate factor scoring techniques. These ten scores were obtained for <u>each</u> of the four testing occasions and this 40 X 40 variable matrix then was factored using image analysis with principal axis and varimax rotation techniques as previously described. The results indicate that the four factors of the School Anxiety Scale cohered as one factor throughout the two school years, but this is not quite as true for the six factors of the Coping Style Scale, indicating that these factors have less stability across this period of time.

Of course, this is not surprising since the stability of these six factors across each of the two school years was relatively low (correlations ranged between .20 - .40 for the Coping Style Scale "factor scores," and between .40 - .60 for the School Anxiety Scale "factor scores").

The results most directly pertinent to this study, however, involved analyses of variance of these ten "factor scores" averaged across the four occasions on which testing was repeated during the two school years. In the fixed effects model which was used, sex and Anglo-Non-Anglo status were the fixed effects; and each of these ten "factor scores" was considered as the dependent variables.

Results

Table 3 summarizes the results of these analyses of variance, indicating the means for all effects and the associated probabilities. It should be noted also that these analyses are based only on the 240 subjects who had <u>scores for all four testing occasions</u>. A previous investigation with the School Anxiety Scale, however, had shown no significant differences between those who missed a testing occasion and those who did not. So it is presumed that the reduced sample utilized in these analyses of variance is generally representative of the total sample.

Table 3 about here

On F1 of the School Anxiety Scale, <u>fear of negative valuation by others</u>, there are both sex and socio-cultural status differences, with Non-Anglos and girls expressing greater fear in school situations where negative valuations by others are likely to occur. Similar sex and socio-cultural status differences also occur with respect to F2, <u>fear of taking tests</u>, except that there is also a significant interaction effect with sex differences being greater among Non-Anglos. On F3, <u>lack of confidence in meeting expectations</u> [illegible]

status differences occur, but no sex differences. There is also an interaction effect, with Anglo boys feeling more inadequate than Anglo girls, and Non-Anglo girls feeling more inadequate than Non-Anglo boys, in meeting expectations of others. For F4, physiological reactivity associated with low tolerance of stress, there are both sex and socio-cultural status differences, with Non-Anglos and girls having the higher means. Also, there is a significant interaction effect, with the difference between Non-Anglo girls and boys being much larger.

On Factor A of the Coping Style Scale, seeks good relations with peers, there are no socio-cultural status differences; but girls have a higher mean than boys. On Factor B, seeks recognition of peers, there are significant socio-cultural and sex differences, with Non-Anglos and girls having the higher means. With respect to Factor C, unwillingness to admit negatively perceived affect, Anglos and girls have lower means, i.e., they were more willing to admit negatively perceived affect. In regard to Factor D, unwillingness to admit negatively perceived motives, Non-Anglos and boys have lower means, i.e., they were more willing to admit negatively perceived motives. On Factor E, seeks recognition of authority, Non-Anglos and girls have higher means; and on Factor F, seeks good relations with authority, there are no socio-cultural status differences, but girls have a higher mean than boys.

Discussion

If a high school anxiety score is indicative of a higher proneness to be anxious, and of the large number of school situations with a high potential for evoking anxiety, then it appears that Non-Anglos are generally more anxious than Anglos, and girls are generally more anxious than boys. And, if particular aspects of school anxiety are examined, this generalization still holds for Non-Anglos and girls, with the one exception that girls don't differ from boys in feelings of inadequacy in meeting expectations of others (principally, parents and teachers). The largest difference between Anglos and Non-Anglos occurs,

however, for the school situations involving tests; and since anxiety generally has interfering effects on performance in test and test-like situations, one of the implications of this finding is obvious: the performance of Non-Anglos on intelligence and other types of academic tests is probably penalized more by the effects of anxiety than is the performance of Anglos.

Results on coping style are mixed, perhaps partly because of the lack of stability of coping style responses which was previously referred to. Considering affirmative social desirability responding as an aspect of the approach style of coping, Non-Anglos had higher means on two of the four factors reflecting this type of social desirability responding, i.e., over-subscribing to socially valued characteristics few children have. If these two factors have been appropriately identified, Non-Anglos are overly concerned with recognition from peers in school and with recognition from authority figures. However, Anglos and Non-Anglos appear to be equally concerned about good relations with peers and authority figures. Put another way, there seems to be no basic difference in the degree to which school situations threaten the needs for affection and affiliation of Anglos and Non-Anglos, while it appears that school situations more seriously threaten the needs for respect and esteem of Non-Anglos than Anglos.

With respect to disaffirmative social desirability responding, i.e., under-subscribing to socially devalued characteristics which most children have, the admission of negatively perceived affect seems to be more threatening to self acceptance of Non-Anglos and boys, while the admission of negatively perceived motives appears to be more threatening to the self acceptance of Anglos and girls. This difference is perhaps related to results which have been reported in a number of studies which indicate that lower-class compared to middle-class children, and boys compared to girls, tend to think about and to evaluate behaviors in terms of the effects of the behavior rather than in terms of the motive behind the behavior.

Thus, in integrating the coping style data, it would appear that the self-enhancing tendencies of Anglos, Non-Anglos, boys, and girls are rooted in needs and school socialization practices which have different priorities and impact on these groups of children. Generally, it would appear that the needs of self respect and esteem have a more precarious existence in school among Non-Anglos than among Anglos, and that the feelings of Non-Anglos and boys, and the motives of Anglos and girls, are subjected to differential school socialization influences.

References

1. Horn, J. L. An empirical comparison of methods for estimating factor scores. Educational and Psychological Measurement, 1965, 25, 313-322.

2. Phillips, B. N. An analysis of causes of anxiety among children in school. Final Report, Project No. 2616, U.S.O.E., Cooperative Research Branch. Austin: The University of Texas, 1966.

Table 1

Items Representing the Factors of the School Anxiety Scale

Factor 1:	Negative Valuation by Others	
	111-17	Are you sometimes afraid of getting into arguments?
	111-19	Do some children in the class say things to hurt your feelings?
	111-35	Are you frequently afraid you may make a fool of yourself?
	111-41	Do you ever worry about what people think of you?
	111-44	Do your classmates sometimes make fun of the way you look and talk?
	111-65	When you recite in class do you often wonder what others are thinking of you?
Factor 2:	Taking Tests	
	1-5*	Do you worry when the teacher says that she is going to ask you questions to find out how much you know?
	1-10*	Do you worry a lot <u>while</u> you are taking a test?
	1-56*	Do you worry about being promoted, that is, passing from the ---- grade to the ---- grade at the end of the year?
	1-62*	Do you worry a lot <u>before</u> you take a test?
	1-65*	<u>After</u> you have taken a test do you worry about how well you did on the test?
	11-54*	Do you wish a lot of times that you didn't worry so much about a test?
Factor 3:	Lack of Confidence in Meeting Expectations of Others	
	1-12	Is it hard for you to do as well as the teacher expects you to do in class?
	1-30	Are you sometimes afraid of expressing yourself in class because you think you might make a foolish mistake?
	11-38	Do you have a hard time keeping up with the other students in class?
	11-50	Do you dread choosing up sides to play games because you are usually one of the last ones chosen?
	111-32	Is it hard for you to have as good a report card as your parents expect you to have?
	111-62	In your school work, do you often forget; or do you feel sure you can remember things?
Factor 4:	Physiological Reactivity	
	1-16*	Do you sometimes dream at night that the teacher is angry because you do not know your lessons?
	11-6	Do your knees shake when you are asked to recite in class?
	11-11	Do you sometimes have a fear of fainting in class?
	11-14	Do you sometimes shake all over when you are asked to recite in class?
	11-28*	Do you sometimes dream at night that you are in school and cannot answer the teacher's question?
	111-16*	When the teacher says that she is going to find out how much you have learned, does your heart begin to beat faster?

*Appears in the <u>Test Anxiety Scale for Children</u>.

Table 2

Items Representing the Factors of the Coping Style Scale

Factor A:	Seeks Good Relations with Peers
	To get others to like you do you try to find nice things to say about them?
	Do you expect to do better school work in the future than you have in the past?
	Do you feel it is important to think about how you can get people to like you?
	When you have done well on something, do you feel pleased with yourself even when no one else in class notices what you have done?
	If a child is new in class and is having trouble making friends do you make a special effort to be friendly to him?
	Do you feel terrible if you break something which belongs to somebody else?
Factor B:	Seeks Recognition of Peers
	Do you always raise your hand in class when you know the answer?
	Do you pay close attention to what the teacher says when she explains something?
	When you are working in a group, do you usually volunteer for more work than anyone else in the group?
	Does your mother bring cookies, help at class parties, and do other things like the mothers of the other children in class?
	Do you get as much approval from the teacher in class as you would like to get?
	Do you get as much approval from other children in class as you would like to get?
Factor C:	Unwillingness to Admit Negatively Perceived Affect
	Do you ever worry?
	Are you ever unhappy?
	Has anyone ever been able to scare you?
Factor D:	Unwillingness to Admit Negatively Perceived Motives
	When you make something in class, do you try to make sure that all the other children see it?
	Do you wish that your teacher paid more attention to you?
	Do you often wish the teacher would slow down until you understand what she is saying better?
	Do you get angry when you are working on something important in class and someone interrupts you?
Factor E:	Seeks Recognition of Authority
	Do you always think that mother's way of doing things is better; or do you sometimes think your own way is better?
	Do you hate to miss school because you don't like to get behind in your work?
	Do you do extra work for the teacher whenever you have the opportunity?
Factor F:	Seeks Good Relations with Authority
	When the teacher gives an assignment, do you get busy on it right away?
	Do you work hardest when you know that what you do will be compared with what other students in class do?
	Do you like to go on trips with your mother and father?

Table 3

Summary of Analyses of Variance, with Sex and Socio-Cultural Status as Fixed Effects, and the Factors of the School Anxiety and Coping Style Scales as Dependent Variables

Variable		Means for All Effects		p
School Anxiety Scale Factors				
F1: Negative Valuation by Others	A	1.78	2.50	.001
	B	1.78	2.49	.001
	AXB	1.46	2.10	.717
		2.11	2.89	
F2: Taking Tests	A	2.34	3.71	.001
	B	2.67	3.39	.001
	AXB	2.18	2.51	.039
		3.17	4.26	
F3: Lack of Confidence in Meeting Expectations of Others	A	1.73	2.76	.001
	B	2.23	2.26	.842
	AXB	1.88	1.57	.042
		2.58	2.95	
F4: Physiological Reactivity	A	0.94	1.86	.001
	B	1.06	1.74	.001
	AXB	0.84	1.04	.002
		1.28	2.45	
Coping Style Scale Factors				
FA: Seeks Good Relations with Peers	A	4.03	4.01	.878
	B	3.90	4.15	.035
	AXB	3.96	4.11	.593
		3.84	4.19	
FB: Seeks Recognition of Peers	A	3.64	3.83	.049
	B	3.63	3.84	.033
	AXB	3.55	3.73	.763
		3.71	3.95	

Table 3 (cont.)

	Variable		Means for All Effects		p
FC:	Unwillingness to Admit Negatively Perceived Affect	A	0.55	0.73	.001
		B	0.76	0.62	.048
		AXB	0.57	0.54	.107
			0.96	0.69	
FD:	Unwillingness to Admit Negatively Perceived Motives	A	2.33	1.64	.001
		B	1.87	2.10	.027
		AXB	2.17	2.49	.624
			1.58	1.71	
FE:	Seeks Recognition of Authority	A	1.92	2.33	.001
		B	1.95	2.30	.001
		AXB	1.73	2.11	.794
			2.16	2.50	
FF:	Seeks Good Relations with Authority	A	2.52	2.51	.909
		B	2.44	2.59	.014
		AXB	2.49	2.56	.665
			2.41	2.62	

NOTE: A = Sex, with first mean being for boys.
B = Socio-cultural status, with first mean being for Anglos.
AXB = Sex by socio-cultural status, with columns being for sex (boys then girls) and rows being for socio-cultural status (Anglo then Non-Anglo)

Subject's personal characteristics, e.g. age, sex, socio-economic status, intelligence, disposition to be anxious, etc.

+

Subject's previous experiences, esp. with test and test-like situations

+

Present research situation, including type of information sought, procedures for obtaining it, characteristics of experimenter, etc.

→ Cognitive appraisal, i.e., beliefs and expectations about the present research situation

→ Produces threat, etc. in majority of subjects which leads to defensiveness manifested in two styles of coping, these being variously identified as avoider, denier, repressor, etc., and as approacher, sensitizer, intellectualizer, etc.

→ Some of the effects of defensiveness include interference with cognitive processes leading to reduced comprehension of verbal material, response stereotypy, etc.; increased salience of self leading to heightened awareness of discrepancies between cognitions of self and ideal self; higher utilization of defense mechanisms such as denial, regression, etc.

→ Acquiescent responding (tendency to agree) is a function of low comprehension of verbal material, response stereotypy, and regression (and dependence); affirmative social desirability responding (oversubscribing to socially valued characteristics few children have) is a function of self-ideal self conflict; negativistic responding (tendency to disagree) is a function of low comprehension of verbal material, response stereotypy, and regression (and dependence); disaffirmative social desirability responding (undersubscribing to socially devalued characteristics most children have) is a function of self-ideal self conflict

→ Acquiescent and affirmative social desirability responding are aspects of the approach style of coping, and negativistic and disaffirmative social desirability responding are aspects of the avoidance style of coping

Figure 1. Response styles schematically represented as aspects of approach and avoidance styles of coping (Adapted from Lazarus, 1964)